

ABSTRACT

A method of automatically correcting dust artifact within images acquired by a system including a digital camera includes determining that certain pixels correspond to dust artifact regions within a first digitally-acquired image. The dust artifact regions are associated with one or more extracted parameters relating to a variable optical system of the digital camera when the first image was acquired. An associated statistical dust map is formed including mapped dust regions based on known correspondence between effects on dust artifact data of values of extracted parameters. Pixels corresponding to correlated dust artifact regions within a second image acquired with said digital camera are corrected according to one or more different values of the extracted parameters relating to the variable optical system based on the associated statistical dust map.